

REMARKS

Applicant has amended the claims. Specifically, Applicant has amended claim 1 to recite that the induction core is a single body. Additionally, Applicant has amended the claim 1 to recite that the magnetic separation notches are located on the entirety of the surface of the induction core. Applicant has amended the claim designation of claims 11 and 12 to read "previously presented", to reflect the fact that they were previously amended.

The Examiner has rejected claims 1, 5, 6, 10, & 12 under 35 U.S.C. §102(b) as being anticipated by Esswein (U.S. Patent No. 5,327,032).

Esswein fails to teach each and every element of the rejected claims. Specifically, Esswein teaches an electrically-energized rotary actuator which includes an annular stator ring (10) having a plurality of slot-like magnetic flux obstructions spaced around the ring of circumference (22, 24, 26 or 22', 24', 26'). Furthermore the induction core taught in Esswein comprises two separate rods (30) extending radially outward from the stator ring (10) along diametrical line (32). It is clear that the induction core is not provided in a single piece but in two separate parts. To the contrary, the present invention teaches an induction core that positively recites that the two opposing extensions are part of a single body.

Furthermore, the axial slots extend along the full axial length of the ring, except for a short un-slotted area at mid point along the length of the ring (10) as described at col. 3 lines 38-41, illustrated in Figure 1.

The un-slotted area on the axial length of the ring is for the purposes of preserving the structural integrity of the ring and facilitating handling during the encapsulation process. Col. 3 lines 47-50.

One of the problems encountered in the field of the invention is how to maintain the structural integrity of the ring provided with slots or grooves on its lateral surface. In the cited prior art document the problem has been solved by providing an un-slotted area. However, this un-slotted has drawbacks when considering magnetic flux obstructions. In the present invention, the single piece induction core solves the problem of the structural integrity of the stator without providing stratagems such as

providing an un-slotted area, as in the Esswein patent. This allows for the placement of magnetic separation notches around the entirety of the surface of the induction core. As a result the present invention teaches a better mitigation of magnetic flux obstructions.

Therefore, the cited prior art fails to teach all the elements of the rejected claim 1. Claims 5, 6, 10, and 12 are all dependent on claim 1. Therefore, the cited claims can be anticipated by the prior art reference.

Based on the above, Applicants respectfully submit that the claims of the present invention are in proper form for allowance. Favorable consideration and early allowance are therefore respectfully requested and earnestly solicited.

Claim 7, 11, and 14 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Esswein (U.S. Patent No. 5,327,032).

The cited claims are dependent on claim 1. The Examiner has not officially rejected claim 1 on the basis of 35 U.S.C. §103(a). However, Applicant interprets the Examiners comments found in the **Response to Arguments** section as a tacit rejection of claim 1 for the reasons found therein.

Applicant respectfully disagrees.

Claim 1 teaches, among other elements, a single piece induction core and the presence of magnetic separation notches on the entire lateral surface of the induction core. These two elements distinguish the present invention from the cited prior art. The use of a single piece induction core is not, as the Examiner suggested, a merely obvious engineering choice. The single piece induction core allows for greater structural integrity of the induction core, thereby allowing notches to progress around the lateral surface of said induction core. This in turn allows for a greater management of the magnetic flux obstructions and ultimately, a more efficient device.

It would not have been merely an obvious engineering choice to solve the issue of structural integrity while at the same time enhancing the number and position of magnetic separation notches on the lateral surface of the induction core. The cited prior art does not suggest nor provide motivation for increasing the number of notches on the induction core. No obvious modification of the prior art would teach the present invention. Merely increasing the number of notches in the cited prior art would only further weaken the structural integrity of the prior art induction core.

There is nothing in the prior art that suggests the addition of more magnetic separation notches to mitigate magnetic flux obstructions. Even if there were suggestions to that effect, which Applicant does not concede, they fail to suggest producing the induction core as a single piece to provide the structural stability necessary to add additional magnetic separation notches.

Claims 4, 11, and 14 are dependent on claim 1. As argued previously, claim 1 can not be obvious in light of the cited prior art patent. Therefore, any claim that depends from claim 1 can not be obvious in light of the cited prior art patent. Based on the above, Applicants respectfully submit that the claims of the present invention are in proper form for allowance. Favorable consideration and early allowance are therefore respectfully requested and earnestly solicited.

Claims 3 and 4 have been rejected under 356 U.S.C. §103(a) as being unpatentable over Esswein (U.S. 5,327,032) in view of Horst (EP 0676853, herein '853 patent).

Applicant notes that claim 3 is dependent on claim 1, and claim 4 is dependent on claim 3. Applicant has previously stated why claim 1 is non-obvious in light of the cited prior art. Combining the '032 patent with the '853 patent only teaches a motor with four equidistant extensions. The Applicant notes that the motor taught in such a combination fails to teach a single piece induction core, or equidistant placement of magnetic separation notches around the entirety of the lateral surface of said induction core. Therefore, the combined prior art fails to teach the entirety of the present invention.

Claim 4 can not be obvious in light of the cited prior art, for the same reason as claim 3. Based on the above, Applicants respectfully submit that the claims of the present invention are in proper form for allowance. Favorable consideration and early allowance are therefore respectfully requested and earnestly solicited.

Claims 8 and 9 have been rejected under 356 U.S.C. §103(a) as being unpatentable over Esswein (U.S. 5,327,032) in view of Mavidia et al. (EP 0342733, herein '733 patent).

Applicant notes that claim 8 and 9 are dependent on claim 1. Applicant has previously stated why claim 1 is non-obvious in light of the cited prior art. Combining

the '032 patent with the '733 patent only teaches a motor, found in the '032 patent, with the addition of a hall-effect sensor adapted to control the position of the rotor. The Applicant notes that the motor taught in such a combination fails to teach a single piece induction core, or equidistant placement of magnetic separation notches around the entirety of the lateral surface of said induction core. Therefore, the combined prior art fails to teach the entirety of the present invention.

Based on the above, Applicants respectfully submit that the claims of the present invention are in proper form for allowance. Favorable consideration and early allowance are therefore respectfully requested and earnestly solicited.

Claim 13 has been rejected under 35 U.S.C. §103(a) as being unpatentable over Esswein (U.S. 5,327,032) in view of Mavidia et al. (EP 0342733, herein '733 patent) in further view of Mayes et al. (EP 0892490, herein '490).

Applicant notes that claim 13 is dependent on claim 1. Applicant has previously stated why claim 1 is non-obvious in light of the cited prior art. Combining the '032 patent with the '733 and '490 patents only teach a motor, as described in the '032 patent, with the Hall-effect sensor of the '733 patent, and an optical sensor found in '490 patent. The Applicant notes that the motor taught in such a combination fails to teach a single piece induction core, or equidistant placement of notches around the entirety of the lateral surface of said induction core. Therefore, the combined prior art fails to teach the entirety of the present invention.

Based on the above, Applicants respectfully submit that the claims of the present invention are in proper form for allowance. Favorable consideration and early allowance are therefore respectfully requested and earnestly solicited.

Respectfully Submitted,


James V. Costigan

Registration No.: 25,669

Hedman & Costigan, P.C.
1185 Avenue of the Americas
New York, N.Y. 10036-2646
(212) 302-8989

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